Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Title V (draft permit) No. V-04-044 (R-2)
Arkema, Incorporated
CARROLLTON, KY.
October 26, 2006
RON SCHNEIDER, REVIEWER

Source I.D.#: 21-041-00002
Source AI #: 690
Activity #:20060008

SOURCE DESCRIPTION:
Arkema Incorporated, Carrollton Plant, is a batch specialty chemical manufacturing producer of various products, including organotins. Specialty chemicals include plastic stabilizers, foam catalysts, industrial catalysts and glass coatings. The plant also operates a wastewater treatment plant (KPDES Permit) and hazardous waste incinerator (RCRA Permit). Both organic and inorganic metallic compounds characterize Arkema products. The plant operates reactors, boilers, blenders, centrifuges, condensers/heat exchanges, decanters, stills, and organic and inorganic storage tanks. A pilot plant (B-37) is used to scale up production and to resolve production glitches. Production areas, by building number or pad area, are noted as follows: B-02, B03, B05, B06, B-17, B22, B27, B28, B32, B33, B39, B48, B-52, B-55, B-67 and B-74.

REVISION DESCRIPTION:
This permit revision addresses three submittals from Arkema, Inc. received by the Division on August 10, September 6, and September 29, 2006. The August 10, 2006 application clarified the acceptable operating conditions of caustic scrubber CO-4867 in process building B-48. Data was included to justify increasing the permitted pressure drop across the scrubber from less than or equal to 2.5 inches of water to less than 20 inches of water. No increase in emissions will be caused by the clarification. The pressure drop in the Control Equipment Area B-48 table, under 7, Specific Control Equipment Operating Conditions for Area B-48, was changed from "<2.5" to "<20" inches of water on page 47 of the permit.

The September 6, 2006 application was for the following:

1) production of additional glass coating manufacturing products (ICD products and TC-100) in Area B-48;
2) to correct the inadvertent omission of an insignificant activity, a small portable milling machine (FS32), in the original permit; and
3) to request that several product tanks in Area B-55 not be required to be routed to the thermal oxidizer for Area B-55 (IR-5519).

Emission increases for the ICD and TC-100 production will be a maximum of 0.16 tons per year (TPY) of methyl isobutyl ketone (MIBK) and less than 0.51 TPY of volatile organic compounds (VOC). These products have been added to the product list in Table A, B-48 Product List on page 46 of the permit.

The tanks from which emission control by thermal oxidizer IR-5519 will not be necessary are EP

146 (TK-5506), the molten tin pot; the molten tin pot blower (BW-5507) and four aqueous product storage tanks (TK-5509, TK-5510, TK-5511, TK-5512), part of EP 150; and an aqueous product blend and storage tank (TK-5513), a process safety liquid catch tank (TK-5531), an anhydrous product storage tank (TK-55100), and two hot oil expansion tanks (TK-5521 and TK-5523), part of EP 147. Only minimal VOC emissions are produced by these tanks, and no HAP emissions occur. No emission increase will result from the discontinued use of controls for the select tanks because emissions consist of nonvolatiles from product storage and molten tin storage tanks. These changes are reflected by the absence of these units in the Control Equipment Area B-55 Table in Area B-55, Section 7.

For simplicity in emission calculations, calculations for the other tanks associated with EP147 [a receiver tank (TK-5508), an absorption column (CO-5508), an emergency pressure relief tank (TK-5517), and a product forecut receiver tank (TK-55101)] and EP150 [two methylene chloride tanks (TK-5502 and TK-5504), a methanol storage tank (TK-5516), a CIP tank (TK-5534), a methylene chloride vaporizer (EX-5502) and a vent header RO pot (TK-5524)] will no longer include credit for control, but the tanks will still be required to be routed to IR-5519 when in operation.

The September 29, 2006 application was for the addition of two new filters in Area B-48 (FI-4817 and FI-4820) as part of emission point 139 (PF48), and for the production of six new products in Area B-32. The six products (Fascat 2001, Fascat 2003, PA-1647, D-20, stannous chloride dehydrate, and Tinsol A) are currently produced in Area B-28, but flexibility to produce them in Area B-32, as well, is being requested. The new products will cause a maximum increase in VOC emissions of 0.30 TPY, and a maximum increase in HCl emissions of 0.0055 TPY. No changes in the permit language are necessary for the changes in Area B-32. The two filters were added to emission point 139 (PF48) on page 45 of the permit, for production area B-48.

The total potential emission increases for the proposed changes will be 0.16 TPY of MIBK to a total plant-wide potential of 0.40 TPY, 0.0055 TPY of HCl to a plant-wide potential of 3.98 TPY, and a VOC emissions increase of 0.81 TPY to a plant-wide total of 125.64 TPY. None of the increases triggers any additional requirements.

COMMENTS:
Only 401 KAR 63:020 applies to the emission points associated with the requested revisions. No control equipment is associated with the requested changes. Emission factors were calculated using a combination of a computer software package (Emission Master) and material balances.

CREDIBLE EVIDENCE:
This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.